

X224-ODCSO1: Direct-to-Phase-II Call for Innovative Defense-Related Dual- Purpose Technologies/Solutions with a Clear Air Force Stakeholder Need

ADDITIONAL INFORMATION

N/A

TECHNOLOGY AREAS:

Air Platform | Battlespace | Bio Medical | Chem Bio Defense | Electronics | Ground Sea | Information Systems | Materials | Nuclear | Sensors | Space Platforms

MODERNIZATION PRIORITIES:

5G | Artificial Intelligence/ Machine Learning | Autonomy | Biotechnology | Control and Communications | Cybersecurity | Directed Energy | General Warfighting Requirements (GWR) | Hypersonics | Microelectronics | Network Command | Nuclear | Quantum Sciences | Space

KEYWORDS:

Open; Other; Disruptive; Radical; Dual-Use; Commercial

OBJECTIVE:

A D2P2 may be awarded for a maximum period of 21 months, including 18 months technical performance and 3 months for reporting, at a maximum of \$1,250,000 SBIR funds. The objective of this topic is to pursue Innovative Defense-Related Dual-Purpose Technologies not covered by other specific SBIR topics, exploring options for solutions potentially outside the current Technology Areas but useful to the AF. This topic seeks companies with capability to complete a feasibility study and prototype validated concepts under an accelerated Phase II schedule. This topic is aimed at later stage research and development efforts rather than "front-end" or basic R/R&D.

DESCRIPTION:

The Air Force is a large and complex organization consisting of many functions with similar commercial sector counterparts. The AF is interested in exploring innovative technology domains with demonstrated clear commercial value in the non-Defense sector through existing products/solutions for potential AF applications. It is impossible to cover all technology areas with SBIR topics. Thus, this topic is a call for open ideas and technologies in areas not currently listed. It is important potential solutions have a high probability of keeping pace with technological change. They should be closely tied to commercial technologies supporting solution development. This topic is intended to identify non-Defense commercial solutions to be adapted and expanded innovatively through R/R&D to meet DoD stakeholders' needs in a short timeframe at low cost. Solutions should be focused on the three areas listed below, meeting as many as possible. Financial Sustainability - The offeror(s) should demonstrate financial sustainability for both the solution and the firm. The best solutions demonstrate this by sales to non-Defense clients and other private investment sources. Defense Need - The offeror(s) should demonstrate understanding of the fit between the solution and Defense stakeholders. The best solutions demonstrate this with a signed memo from a specific, empowered AF end-user and customer (likely not the same person) ready and willing to participate in the proposed prototype solution's trial. This should include specific objectives and measurable (quantitative) key results the proposed solution can achieve to meet AF end-user and customer needs. Technical/Team - The proposed approach's soundness, technical merit, and innovation and incremental progress toward fulfilling an AF need and the qualifications of the proposed Principal Investigators/Project Managers, supporting staff, and consultants to execute against the proposed

approach. Proposals should demonstrate a product-market fit between an AF end-user and the proposed R/R&D adaptation of an existing or emerging non- Defense commercial solution. This is accomplished most effectively through a proposal with a mature non-Defense technical solution and a clear understanding of its adaptation to meet an AF customer's specific need, supported by documentation from a specific motivated, empowered AF end-user and customer ready and willing to participate in the proposed prototype solution's trial. The USAF S&T Strategy identifies five (5) Strategic Capabilities, listed below. The offeror should address the solution's connection to at least one of them. Global Persistent Awareness; Resilient Information Sharing; Rapid, Effective Decision-Making; Complexity, Unpredictability, and Mass; Speed and Reach of Disruption and Lethality. BLUE SKY* US Air Force S&T Strategy. *NOTE: While the S&T strategy document contains only five capabilities, it is possible for a solution to provide a strategic capability in a previously unconsidered area. Therefore, if the offeror feels the proposed solution does not fit within one of the listed capabilities, reference "BLUE SKY", including an explanation of the solution's ability to provide increased strategic capability within the context of AF, national, and global constraints. The alignment between a proposal and an S&T Strategic Capability can strengthen an application. Note, this does not change the requirement to demonstrate the Defense need, but may complement it. This also does not preclude companies looking to solve other problems not listed in the S&T Strategic Capabilities. It is simply intended to give indications of AF special emphasis areas at this time.

PHASE I:

This topic is intended for technology proven ready to move directly into Phase II. Therefore, a Phase I award is not required. The offeror is required to provide detail and documentation in the Direct to Phase II proposal which demonstrates accomplishment of a "Phase I-like" effort, including a feasibility study. This includes determining, insofar as possible, the scientific and technical merit and feasibility of ideas appearing to have commercial potential. It must have validated the product-market fit between the proposed solution and a potential AF stakeholder. The offeror should have defined a clear, immediately actionable plan with the proposed solution and the AF customer. The feasibility study should have: Identified the prime potential AF end user(s) for the non-Defense commercial offering to solve the AF need, i.e., how it has been modified; Described integration cost and feasibility with current mission-specific products; Described if/how the demonstration can be used by other DoD or Governmental customers.

PHASE II:

Proposals should include development, installation, integration, demonstration and/or test and evaluation of the proposed solution prototype system. This demonstration should focus specifically on: Evaluating the proposed solution against the proposed objectives and measurable key results. Describing in detail how the installed solution differs from the non-Defense commercial offering to solve the Air Force need, as well as how it can be scaled for wide adoption, i.e., modified for scale. Identifying the proposed solution's clear transition path, taking into account input from affected stakeholders, including but not limited to, end users, engineering, sustainment, contracting, finance, legal, and cyber security. Specifying the solution's integration with other current and potential future solutions. Describing the solution's sustainability, i.e., supportability. Identifying other specific DoD or Governmental customers for the solution

PHASE III DUAL USE APPLICATIONS:

Phase II solutions may transition quickly to Phase III after the product-market fit is verified. The firm will transition the adapted non-Defense commercial solution to provide expanded mission capability to a broad range of potential Government/civilian users and alternate mission applications. NOTES:

Due to heavy interest in this topic, the AF will not answer questions via email, except in rare cases. Teleconferences will be held to efficiently address all questions. a. Please monitor <https://af-ventures.com/> for specific telecom details. SBIR solicitations result in contracts and Other Transactions for Prototype, NOT grants. Therefore, SAM.gov registration should reflect ALL AWARDS for "Purpose of Registration". Firms registered to receive grants only will be ineligible. b. Registration in SAM is required to be eligible for award. Please verify the firm's CAGE code, company name, address information, DUNS numbers, etc., prior to submitting a proposal. It is the firm's responsibility to ensure the proposal and SAM.gov are consistent. c. Proposed technologies may be restricted under the International Traffic in Arms Regulations (ITAR) which control Defense-related materials/services import/export, or the Export Administration Regulations (EAR), controlling dual use items. Offerors must review the U.S. Munitions List, <https://www.law.cornell.edu/cfr/text/22/121.1>, and provide a tentative determination regarding applicability to their proposed efforts. If determined applicable, a certified DD Form 2345, Militarily Critical Technology Agreement, must be submitted with the proposal. Information regarding the application process and instructions for form completion are found at <https://www.dla.mil/HQ/LogisticsOperations/Services/JCP/DD2345Instructions/>. NOTE: Export control compliance statements are not all-inclusive and do not remove submitters' liability to 1) comply with applicable ITAR/EAR export control restrictions or 2) inform the Government of potential export restrictions as efforts proceed.

REFERENCES:

1. FitzGerald, B., Sander, A., & Parziale, J. (2016). Future Foundry: A New Strategic Approach to Military- Technical Advantage. Retrieved June 12, 2018:<https://www.cnas.org/publications/reports/future-foundry>
2. Blank, S. (2016). The Mission Model Canvas - An Adapted Business Model Canvas for Mission-Driven Organizations. Retrieved June 12, 2018:<https://steveblank.com/2016/02/23/the-mission-model-canvas- an-adapted-business-model-canvas-for-mission-driven>
3. US Department of Defense. (2018). 2018 National Defense Strategy of the United States Summary, 11. Retrieved from:<https://www.Defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy- Summary.pdf>

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